Bowditch, Harvard Medical School; Dr. F. S. Lee, College of Physicians and Surgeons; Dr. C. F. Hodge, Clark University; Dr. O. S. Strong, Columbia College; Dr. C. S. Minot, Harvard Medical School; Dr. J. S. Kingsley, Tuft's College; Dr. J. P. McMurrich, University of Michigan; Dr. H. F. Osborn, Columbia College.

Applications for admission to the laboratory for students and teachers should be made to Prof. H. C. Bumpus, Brown University, Providence, R. I.

BOTANY.

THE laboratory work in Botany (July 10–August 17) will be restricted to the study of the structure and development of types of the various orders of the cryptogamous plants, and especial attention will be given to the study of the various species of Marine Algae which occur so abundantly in the waters about Woods Holl.

The following colleges and societies controlled private rooms or tables during the season of 1894:

Boston University School of Medicine, Brown University, Bryn Mawr College, College of Medicine, Syracuse University, College of Physicians and Surgeons, Columbia College, Hamilton College, Harvard University (Professor Farlow), Lake Forest University (President Coulter), Massachusetts Institute of Technology, Miami University, Mt. Holyoke College, Missouri Botanical Garden, Northwestern University, Princeton College, Smith College, University of Chicago, University of Cincinnati, University of Pennsylvania (Provost Harrison), Vassar College, Wellesley college, Williams College, Women's College Baltimore, American Association for the Advancement of Science, American Society of Naturalists, Beta Alpha Chapter of the K. K. G. Fraternity of the University of Pennsylvania, Lucretia Crocker Scholarship, Woman's School Alliance Milwaukee.

THE GENERIC NAMES OF THE THREE-TOED ECHIDNA.

THE three-toed *Echidna* discovered by M. Bruijn in northwestern New Guinea, and described by Peters and Doria in 1876 as *Tachyglossus bruijnii,* has been commonly recognized as belonging to a different genus from the common five-toed *Echidna* of Tasmania and Australia. Although the species was described less than twenty years ago, four generic names have been proposed for it. Early in 1877 Dr. Theodore Gill erected the genus *Zaglossus** for it, and Gervais separated it in November of the same year under the name *Acanthoglossus* ;† but a few days later, finding that this name had been pre-occupied, he renamed the genus *Proechidna.*‡ Five years later M. Dubois proposed to replace *Acanthoglossus* by *Bruynia.*§

Of these four names *Proechidna* has come into general use, while *Zaglossus* Gill seems never to have been mentioned by any subsequent author. My attention was first called to it several months ago by Dr. Gill himself, who suggested that it would probably antedate *Proechidna,* but no copy of Gervais' Ostéographie being at hand I could not determine which name had priority. Recently I have had an opportunity of examining a copy of the Ostéographie des Monotrèmes, and find that not only does *Zaglossus* antedate *Proechidna,* but in fact it was the earliest name proposed for the genus, and should be adopted to the exclusion of all the others.

The second chapter of the Ostéographie, apparently the only part of the text ever published, contains the name *Proechidna* on page 43. In the introductory foot-note on

* Ann. Record of Science & Industry for 1876, May 5, 1877, p. clxxi.

† Comptes Rendus, lxxxv., No. 19, séance du 5 Nov., 1877, p. 838.

‡ Ostéographie des Monotrèmes Viv. et Fossiles, Nov. 30, 1877, p. 43.

§ Bull. Soc. Zool. de France, vi. No. 6 (1881) 1882, pp. 267–270, pls. ix–x.

page 41, dated '*30 Novembre, 1877*,' M. Gervais gives the reasons for publishing the second chapter first, and states that the first and third chapters will probably appear during the year 1878. From this statement it is evident that *Proechidna* could scarcely have been published prior to December 1, 1877. The Annual Record of Science and Industry for 1876, on the other hand, was received at the Library of Congress, Washington, D. C., on April 28, 1877. This date, however, may be the date of entry for *copyright*, and does not necessarily show that the book was issued on April 28. A copy of the same volume in the library of the U. S. Patent Office, Washington, D. C., was received early in May, while the publishers, Messrs. Harper & Brothers, give the exact date of publication as May 5, 1877.

The synonomy of the genus should stand:

Zaglossus Gill, May 5, 1877.

Acanthoglossus Gervais, Nov. 5, 1877 (Date of reading, *not* of publication).

Proechidna Gervais, Nov. 30, 1877 (Date of prefatory foot-note).

Bruynia Dubois, ———, 1882.

The evidence seems sufficient to show that *Zaglossus* was published at least as early as May 5, 1877, and, therefore, antedates *Acanthoglossus* by six months and *Proechidna* by nearly seven months.   T. S. PALMER.

WASHINGTON.

CORRESPONDENCE.

SPECTROSCOPIC OBSERVATIONS OF SATURN AT THE ALLEGHENY OBSERVATORY.

To THE EDITOR OF SCIENCE: As certain observations of mine on the spectrum of Saturn have been widely noticed by the daily press, and various reports have been spread, some of which are correct and some incorrect, but none of which were made by my authority, I take this opportunity to explain the real character of the observations. It is hardly necessary for me to say here that I have made no 'claims' whatever respecting them.

The observations furnish a direct proof of the accepted hypothesis that the ring of Saturn consists of a multitude of small bodies revolving around Saturn in circular orbits. The hypothesis is an old one, but its universal acceptance dates from the publication of Maxwell's prize essay in 1859. While the mathematical proofs given by Maxwell and his predecessors are conclusive, a demonstration of the hypothesis by the widely different method of direct observation with the spectroscope is not, I think, without interest.

The proof depends upon an application of the well-known principle of Doppler, by which the motion of a heavenly body in the line of sight can be determined by measuring the displacement of a line in its spectrum. Under the two different hypotheses, that the ring is a rigid body, and that it is a swarm of satellites, the relative motion of its parts would be essentially different; hence, to distinguish between these two hypotheses it is only necessary to find a method of sufficient delicacy, in order to bring the question within the province of the spectroscope. Any method depending on the successive comparison of the spectra given by different parts of the ring would be almost certain to fail. The method which I have employed is explained below.

If two planes, at right angles to each other, are passed through the observer and the system of Saturn, one (A) passing anywhere through the system and the other (B) through its center, the velocity, resolved in the direction of the line of sight, of any point on the surface of the system where it is intersected by plane A can be expressed as a function of the perpendicular distance of the point from plane B. It is only necessary to consider the case when the plane A is parallel to the major axis of the apparent ring. On the assumption that the